

FM 100-50

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By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

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OPERATIONS FOR NUCLEAR-CAPABLE UNITS

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Unless otherwise noted, the use of "he," "him," "his," or "men" will represent both masculine and feminine genders.

CHAPTER 1

INTRODUCTION

PURPOSE

This manual prescribes procedures, techniques, and standards for units with a **nuclear mission** operating under combat conditions. It also provides guidance to commanders and staffs for functions peculiar to nuclear missions and capabilities.

SCOPE

Major commanders may modify standards within this manual, but may not reduce them unless operational requirements and the tactical situation dictate. However, imposing unnecessary requirements that could overburden units and degrade their capability for sustained combat operations should be avoided.

For the purpose of this manual, a unit with a nuclear mission performs, or is responsible for, at least one of the following functions:

- | | |
|----------------------|--|
| ● Security | ● Demolition |
| ● Maintenance | ● Explosive ordnance disposal (EOD) |
| ● Storage | ● Nuclear accident and incident control (NAIC) |
| ● Transportation | ● Command and control |
| ● Assembly | ● Planning |
| ● Firing or delivery | |

The provisions of this manual apply when a unit: 1. *Assumes an alert posture*, or 2. *Is authorized during an increased condition of defense readiness to remove nuclear weapons from their normal storage location or storage configuration in preparation for deployment.*

MISSION

The mission of nuclear-capable US forces is to:

- Receive nuclear weapons.
- Maintain them in a safe and secure environment in accordance with procedures prescribed by higher headquarters.
- Deliver them against specified targets when directed.

A tactical unit selected to move, store, or secure war reserve nuclear weapons in peacetime will be trained, evaluated, and certified *especially for that mission*. The **mission statement** will specify the type of weapons involved, the vehicles and/or aircraft to be used, the origin and destination of the move, the route to be followed, and the duration of the operation.

TRAINING

Training in *all* aspects of nuclear operations must be *thorough, comprehensive, imaginative, and totally integrated*. *Units must train as they will fight*. Training, evaluation, and readiness criteria will reflect only those functions that are essential to unit combat readiness.

For units having *both* a nuclear and nonnuclear capability, the former must be routinely integrated into the total mission capability without degrading or detracting from either. Requirements peculiar to the nuclear mission should be included in every exercise, not just during "nuclear training." Examples of such exercises include simulation of a **prescribed nuclear load (PNL)** using nuclear training rounds and training containers, loading and tie-down, establishment of a **field storage location (FSL)**, technical operations, and maintenance of a **Personnel Reliability Program** under field and simulated combat conditions. For field artillery units, exercise scenarios should include day and night simulated nuclear missions and live nonnuclear fire missions wherever possible. For **atomic**

demolition munition (ADM) teams, exercises should be conducted under field conditions and should include the ADM executing/mission commander, guard force, communications, target folders, and other support elements, as appropriate.

Nuclear-capable units should train with other units and staff elements with whom they would operate during combat. Examples are maneuver units providing security assistance to ADM missions or artillery resupply mission; military police security units supporting an ordnance special ammunition company; or an ordnance company issuing nuclear weapons to an engineer or field artillery unit during the training and evaluation phases of an **Army Training and Evaluation Program (ARTEP)**.

CHAPTER 2

PERSONNEL RELIABILITY PROGRAM (PRP)

GENERAL

Effective measures *must* be taken to insure that nuclear weapons are not subjected to any unauthorized or inadvertent acts which could degrade their performance. *The most important factors toward this end are the reliability and qualifications of people who have custody of, control access to, or have access to the weapons.* The Personnel Reliability Program, as specified in chapter 3, AR 50-5, is designed to insure that only reliable and qualified personnel are used in all phases of nuclear operations.

APPLICABILITY

Units should be in the best possible PRP posture prior to hostilities. Although the PRP generally applies during hostilities as well as in peacetime, in certain combat situations it may be impractical to implement; nonetheless, *the principles will continue to apply.* The commander may waive administrative procedures of the PRP in combat including the **Nuclear Duty Position Roster**, but he must take whatever actions are necessary, consistent with good judgment, to fulfill his mission responsibilities with available manpower resources.

CHAPTER 3 COMMAND CONTROL

GENERAL

Due to their political sensitivity and military potential, *policies and decisions concerning nuclear weapons are made at the highest levels of government*. This is the basis for nuclear weapons control by the **National Command Authority (NCA)**.

The NCA exercises control of all nuclear weapons through the **Joint Chiefs of Staff (JCS)**. The JCS, in turn, prescribe special procedures for authentication of certain orders affecting these weapons. Special devices and procedures provide positive launch control by interrupting the assembly or firing sequence until secure enabling information is received. The former is accomplished by use of **sealed authentication systems (SAS)**; the latter by use of **permissive action links (PAL)**.

Authority for, and policies and procedures governing use and safeguarding of, SASs and PALs are promulgated by the JCS to unified and specified commands in **JCS Publication 13**. Service headquarters are not authorized to supplement JCS Publication 13 except to amplify accounting instructions.

NUCLEAR CONTROL ORDERS

The JCS have identified certain nuclear control orders that must be authenticated by use of SASs. Other, less critical orders may be authenticated by nonsealed systems. Commanders of unified and specified commands establish **Emergency Action Procedures (EAP)** for transmitting, receiving, and authenticating nuclear control orders. Commanders of US Army forces under operational control of unified commands establish their own EAP for nuclear forces. Combat, combat support, and combat service support units and appropriate intermediate command echelons will be prepared to receive, transmit, authenticate, act on, and safeguard nuclear control orders as appropriate.

Safeguarding of nuclear control orders includes safeguarding not only information, but also related SAS material. SASs must be kept under two-man control and under suitable security in accordance with the provisions of JCS Publication 13 and unified/specified command directives.

PERMISSIVE ACTION LINKS

PALs are mechanical or electromechanical devices which, when in use, positively disable the weapon by interrupting the assembly or firing sequence. They are available for all US Army nuclear weapons. *Once disabled by a PAL device, a weapon can be enabled only by enabling the device or by applying the proper combination to remove it.*

The JCS have established policy and procedures for control of PAL materials. Commanders of unified and specified commands detail procedures for PAL operations conducted within their commands. *Department of the Army has established technical procedures for enabling, disabling, maintaining, installing, and removing applicable PAL devices.*

NUCLEAR WEAPONS SAFETY RULES

Department of the Army publishes safety rules for each of its nuclear weapons. **These rules are issued in the form of Army Regulations in the 50-100 series.** Their purpose is to insure that operations involving US Army nuclear weapons are conducted *as safely as possible.*

Safety rules provide positive measures to:

- Insure adequate security.
- Prevent deliberate prearming, arming, launching, firing, or releasing except upon execution of emergency war orders or when directed by competent authority.
- Prevent jettisoned weapons or those involved in accidents or incidents from producing a nuclear yield.

US Army Nuclear Weapons Safety Rules apply to *all* phases of employment of a nuclear weapon. They establish the *basic framework, concepts, and rules for employment*. However, *they do not in themselves provide the authority to employ a nuclear weapon*.

Although the *Safety Rules are mandatory* for use in *all* nuclear weapons employment throughout the **stockpile-to-target sequence (STS)**, they do not preclude deviation in an emergency. Commanders of units possessing nuclear weapons, however, *must insure that US forces maintain accountability of those weapons*. Major commanders may prescribe additional rules necessary for unique command requirements. The rules for each system may also specify restraints to remain in effect until certain conditions are fulfilled.

SURVIVABILITY AND RESPONSIVENESS

Units having custody of nuclear weapons or the capability to deliver will be *prime targets* of enemy intelligence and target-acquisition operations. Their destruction or neutralization will be a high priority mission for enemy artillery, air, airborne, or airmobile forces. Survivability can depend heavily on **operations security (OPSEC)**.

Weapons and units must also be responsive. *Weapons must be safe and secure and in the hands of people who can deliver timely and effective fire against enemy targets*. They must be *immediately* at hand or located in proximity to the delivery units. Effective, responsive procedures must be developed by the controlling headquarters and practiced by command, staff, and delivery unit personnel.

OPERATIONS SECURITY

The primary purpose of OPSEC is to avoid detection and, if detected, to mask capabilities or intentions. OPSEC includes **physical security, signal security (SIGSEC), information control, and use of deception**.

Security for nuclear-capable units includes physical measures normally taken to insure security of any combat unit in a tactical

situation and special measures taken at field storage locations (FSL), such as application of the two-man rule. The two-man rule is described in chapter 4. Physical security of nuclear weapons will be completely integrated with overall unit defense security and will include plans for displacement or emergency destruction.

SIGSEC is achieved through effective use of **communications security (COMSEC)**, **electronic security (ELSEC)**, and **compromising emanations control (CEC)**.

1 **COMSEC** uses telecommunications systems to deny information to the enemy in the event transmissions are intercepted. It can be maintained through such measures as:

- *Use of proper procedures*
- *Use of authorized crypto systems*
- *Restricting use of certain types of communications equipment*
- *Control of undesirable emissions*

2 **ELSEC** measures are taken to prevent the enemy from gaining information from noncommunication emitters such as radar.

3 **CEC** measures are taken to prevent enemy interception of unintentional data-related or intelligence-bearing signals.

Information control, to include written, spoken, visual, and graphic information, is imposed to prevent disclosure of current or intended friendly operations. Information control involves:

- Screening and control of public information releases.
- Classification, screening, or control of documents, publications, correspondence, and graphics.
- Indoctrination or isolation of personnel to prevent spoken disclosures.

Certain operations by nuclear-capable units are susceptible to detection and analysis by audio, visual, photographic, and satellite observation. Therefore, it is particularly important that *nuclear units avoid operations or dispositions which have distinctive signatures*. Nuclear weapon convoys should not be distinguishable from any other type of convoy because of

composition (number and type of vehicles), flags, placards, or types and signal patterns of communications equipment. Ordnance **special ammunition supply points (SASP)** and FSLs should not be distinguishable by size, location, type of activity, or special security and firefighting measures.

While *deception* may be planned and implemented on a grand scale at the highest echelons, the small-unit commander must rely on camouflage, camouflage discipline, light and sound discipline, alternate and dummy positions and routes, and decoys as the best means of insuring survival of his unit. However, *dummy positions and decoys should not be used without clearance from higher headquarters.*

FIRE SUPPORT COORDINATION AND STRIKE WARNING

Use of nuclear weapons *does not change the principles of fire support coordination.* However, the increased lethality and variety of effects place increased importance on methods and procedures for safeguarding friendly troops and activities during nuclear operations. **Standardization Agreement (STANAG) No 2104** establishes a standard warning message and defines notification channels for warning of friendly nuclear strikes. Unit SOPs should provide detailed instructions for disseminating strike warnings.

COMMUNICATIONS

Unless well buried, wire is vulnerable to blast and thermal effects. Radios and other electronic devices are vulnerable to blackout and destruction of components from the effects of **electromagnetic pulse (EMP)**. Nuclear-capable units must establish alternate communication means with units they support and include measures in SOPs to increase communication survivability.

This threat of destruction requires that a portion of a unit's radios be habitually disconnected and protected by a shelter or other attenuation means.

During training exercises, units should operate part of the time without a portion of their authorized communications capability in order to develop procedures for continuing operations under reduced conditions.

CHAPTER 4

FIELD OPERATIONS

GENERAL

Several aspects of field operations are of particular concern to commanders of nuclear units. These are:

- Security measures
- Two-man rule
- Custody
- Accountability
- Movement in combat
- Field storage of weapons

SECURITY MEASURES

The primary responsibility for security of nuclear-capable units rests with the unit itself. However, to insure survivability of these units, maneuver commanders must be prepared to provide all possible assistance to preclude loss, especially during movement and resupply. Atomic demolition munition (ADM) units rely on security provided by the supported corps, division, or brigade.

Each unit will maintain a *reaction force* as an integral part of its defense plan.

Primary tasks of the reaction force are to:

- Strengthen a threatened portion of the defense.
- Destroy or eject any enemy who penetrates the perimeter.
- Restore the integrity of the unit position.

A battery or company reaction force is about the size of an infantry rifle squad. The force commander is designated by the unit commander. Nuclear units must coordinate with higher and adjacent units *for additional support*.

If destruction or overrun of the unit position area is imminent, *emergency displacement, disablement, or emergency destruction (ED) procedures should be implemented*.

First security measures on arrival at a field position normally will be the establishment of a defensive perimeter, followed by improvements to nuclear **field storage locations (FSL)** and command control facilities as time and resources permit.

Unit tactical SOPs will be *based on security standards and procedures set by higher headquarters*. The SOPs will prescribe procedures for securing nuclear weapons during movement, storage, and prefire operations.

It is sometimes necessary to augment security of activities storing nuclear weapons. *Parent units must plan for such contingencies*.

TWO-MAN RULE

A *minimum* of two authorized persons—each capable of detecting incorrect or unauthorized procedures with respect to the task being performed and each familiar with applicable safety and security requirements—*must be present* during any operation which affords access to material requiring protection under the two-man rule.

The two-man rule *prohibits access to protected material by a lone individual* in order to preclude either inadvertent or intentional damage to, or unauthorized firing or launching of, a weapon. Application of the rule will be enforced by the persons accomplishing the assigned task or operation. It will be applied *as required* by Nuclear Weapons Safety Rules, applicable surety and security regulations, operations directives, and SOPs.

CUSTODY AND ACCOUNTABILITY

Commanders of nuclear-capable units will be prepared to assume custody of nuclear weapons. This includes not only physical possession of the weapon, but *total responsibility for its movement, storage, security, safety, maintenance, and related accident and incident control.*

Accountability of nuclear weapons will be by continuous receipt. Accountability *does not end* until the weapon is expended or destroyed and appropriate reports submitted.

Formal accountability of nuclear weapons issued during combat or when CONUS-based units are inserted in the theater of operations will be maintained at the issuing activity. DD Form 1150 will be used for transfer of custody, certificate of expenditure, certificate of destruction, or transfer of reportable nuclear residue or components, to include PAL devices.

The DD Form 1150 will be used for transfers of custody between the **special ammunition supply point (SASP)** and using units, or between using units.

Combat accounting and reporting procedures for use between SASP and supported units will be developed by the supporting SASP.

MOVEMENT IN COMBAT

Using and supporting units will be required to move nuclear weapons on the battlefield in vehicles or aircraft. Weapon-carrying vehicles will be free of electrical or mechanical defects that could prevent safe arrival, or will meet applicable **preventive maintenance checks and services (PMCS)** or **equipment serviceability criteria (ESC) (amber)** as determined by the major Army command concerned. Vehicles and aircraft will carry authorized fire-fighting equipment and will be free of any unnecessary hazardous materials. *No maintenance or repairs that might increase the chance of fire will be performed on a vehicle or aircraft while a nuclear weapon is on board.*

Route planning will include provisions for reconnaissance and en-route security commensurate with any anticipated threat. When required by theater directives, movement will be

coordinated with the appropriate movement control center. *Maneuver commanders should be prepared to assist with security during movement.*

During displacement, nuclear weapon carriers will be so located in a convoy as to provide maximum protection of the weapons. During surface movement, e.g., an artillery or engineer unit picking up weapons from an SASP, minimum security measures will include a designated courier (officer or NCO), a driver and assistant driver for each nuclear weapons carrier, and a security force commensurate with the expected threat en route, but consisting of no less than five armed individuals. (The supported unit will augment ADM unit security if necessary.) Normally, a surface movement will include a *minimum of three vehicles (a load carrier and two security vehicles) except when precluded by operational necessity*. The courier will be responsible for establishing a custodial chain of command. Larger surface resupply movements, such as between SASPs or within the **communications zone (COMMZ)**, will require a security force commensurate with the number of weapons being moved and any anticipated threat. During any move, *contact must be maintained* with a headquarters capable of responding to a request for assistance.

The courier, drivers, and assistant drivers of nuclear weapons carriers must be in the **Personnel Reliability Program (PRP)**. During movements and while halted, the driver and assistant driver of each vehicle carrying nuclear weapons may constitute the required two-man control. Drivers and assistant drivers will be *specifically informed of their responsibilities prior to each move*.

The commander responsible for movement will provide for additional security if he does not have sufficient resources of his own. *Couriers must be able to destroy weapons in case of an emergency during a move.*

Nuclear weapons may be moved by Army aircraft within the combat zone, or forward from the COMMZ into the combat zone. *Only aircraft and/or weapon combinations and modes for which approved procedures have been published will be used.* During air movement, minimum security measures will include a courier (officer or NCO), two PRP-qualified guards for each

load-carrying aircraft, and members of the air crew. Additional security, to include airborne aircraft or aircraft on ground alert, may be required, particularly when overflights of known or suspected enemy areas are necessary.

Shipping and receiving units are responsible for loading and unloading weapons and, when necessary, assisting the aircraft commander and crew in proper tie-down procedures. Loading and unloading should be *"tailgate-to-tailgate,"* and should be executed as quickly as possible. The movement should be planned to minimize ground time and executed without aircraft shutdown when possible.

Applicable tie-down procedures will be used for the weapon-vehicle and/or aircraft combination involved. *When vehicles without standard tie-down equipment are used, the tie-down procedures outlined in appendix B of the appropriate technical manual (TM) will be used.*

If two-man control and other security provisions for the prescribed nuclear load (PNL) can be provided, the PNL may be dispersed throughout the column to minimize potential loss from enemy action. **Demolition materials may be transported with nuclear weapons in accordance with provisions of appendix B of the applicable -12 or -20 TM.** Unit SOPs should prescribe procedures for movement of ammunition.

Stereotype patterns of activity must *not* evolve at locations where nuclear weapon movements originate and terminate. *Such signatures could identify activities as nuclear-related and alert an enemy of an impending move.*

FIELD STORAGE

Each nuclear-capable unit having custody of nuclear weapons in combat will establish an FSL within its defensive perimeter in which to store its weapons. It may range in size and description from a container housing a single weapon, or the bed of a truck containing one or more weapons to an area containing a large number of weapons. *The primary purpose of the FSL is to preclude unauthorized and uncontrolled access to weapons.* Unit SOPs should prescribe procedures for limiting access.

Access to nuclear weapons will be controlled by two PRP-qualified guards. Additional guards may be posted as deter-

mined necessary by the unit commander, and their number will vary depending on weather, terrain, or such artificial obstacles as tents or vehicles. Additional guards need not be in the PRP and do not require a security clearance. Their purpose is to *preclude unauthorized access to nuclear weapons* by preventing entry into the FSL by unauthorized personnel. Unit SOPs will prescribe duties of security personnel.

Recognition by PRP-qualified guards is sufficient to warrant entry into the FSL by authorized personnel. The unit commander or his authorized representative(s) may verbally authorize entry by other personnel. Written guard orders are not required; however, *standard unit security measures should be clearly defined in the unit's SOP.*

In establishing a unit FSL, every effort will be made to provide a safe and secure environment for weapons while concealing the nature and purpose of the activity. For example, foxholes at the FSL will afford protection for guards and make them less noticeable to the enemy.

Any stylized operational characteristics may reveal the location of a nuclear-capable unit. Therefore, *any signature-type layout or FSL operation must be avoided.*

CHAPTER 5

TECHNICAL OPERATIONS

GENERAL

Technical operations consist of such weapon-related activities as packaging and unpackaging, PAL unlock, assembly, prefire, cancel fire, disarm, storage monitoring, periodic maintenance, and emergency destruction. Technical operations will be performed according to provisions of *appropriate safety rules* and weapon *technical manuals (TM)*. Emergency destruction of nuclear weapons will be performed according to provisions of the applicable system TM and TM 39-50-8, Emergency Destruction of Nuclear Weapons.

EMERGENCY DESTRUCTION (ED)

Command disablement or ED of nuclear weapons may be required to prevent capture or use by the enemy, or compromise of design. Disablement or destruction may be required when:

- A unit or position is about to be overrun.
- A unit is unable to evacuate a part or all of its weapons during a withdrawal.
- A rear-area storage site is threatened by a major guerrilla or underground force attack.

Unit SOPs will provide for ED of the unit's nuclear weapons. The unit's normal ED capability (materials, personnel, security, time allotted for execution) *must be sufficient to insure emergency destruction of all unit weapons.*

The SOP will specify—

- The amount of ED material to be on hand at all times
- How and where the material will be carried during movement
- How and where it will be stored with reference to unit field storage location (FSL), special ammunition supply point (SASP), or major storage area
- Who is authorized to order ED and how the order will be disseminated
- Which unit personnel normally will execute ED
- How execution will be coordinated with other emergency operations (e.g., local defense, withdrawal, evacuation, and destruction of other classified or major items of equipment, to include permissive action links (PAL)).
- That, under certain circumstances, it may be prudent to precut ED materials (precut material must be protected against weather).

Emergency destruction could take place during a period of great stress and confusion. Therefore, it is necessary to insure that sufficient personnel, trained and designated to execute ED, are not so committed to perimeter defense or some other activity that they cannot disengage to execute ED on order.

Emergency destruction may be directed by higher headquarters, or it may be executed at the discretion of the immediate commander, custodian, or senior survivor. Except in the most unusual circumstances, emergency destruction of larger stocks to the rear will be executed *only on order from the major commander concerned* (corps, Corps Support Command (COSCOM), Theater Army Area Command (TAACOM), or independent

task force). Any ED order originating outside of the unit having custody of the weapons or material will be authenticated in accordance with procedures prescribed in chapter 3 of this manual, in command SOP, and in Communications-Electronics Operation Instructions (CEOI).

Weapons may be disabled when time does not permit their destruction in accordance with established procedures. Unit SOPs will provide for disablement as appropriate.

CHAPTER 6

NUCLEAR WEAPONS LOGISTICS

GENERAL

Supply, service, distribution, and maintenance procedures differ for nuclear and nonnuclear weapons.

- National policy places stringent controls on the use of nuclear weapons. Every nuclear weapons supply action in a theater of operations, whether it is placing rounds in a special ammunition supply point (SASP), establishing a prescribed nuclear load (PNL), or replenishing prescribed nuclear stocks (PNS), requires an operational decision.

- Security measures must be applied to *all phases* of requisition, receipt, storage, and shipment of nuclear weapons. Logistical data and accounting information require special reporting procedures.

- Technical maintenance requirements must be satisfied and special reports maintained on each nuclear weapon until it is expended or destroyed. Nuclear weapons are *not* considered expended when issued to a using unit.

Peacetime nuclear weapons logistic operations differ from combat or increased readiness.

- Peacetime operations are primarily concerned with storage and maintenance. Movement of weapons is *restricted to essential operations* such as positioning or direct exchange of unserviceable items.

- During combat or increased readiness, survivability of nuclear weapons depends to a large extent on dispersion.

- Weapons may be dispersed to wartime locations or issued to using units as PNLs, using using-unit transportation. Transportation resources required for movement of corps or theater reserve stocks are provided from Theater Army (TA), Corps Support Command (COSCOM), or Theater Army Area Command (TAACOM) resources.

- Once dispersal has begun, only limited maintenance service is available. Nuclear weapon support units in the field can issue nuclear rounds, receive unserviceable rounds or components, receive residue from expended weapons, and provide a limited supply of repair or replacement parts to using units.

SUPPLY

Nuclear weapons are controlled as a *scarce and critical resource* and positioned and allocated according to operational requirements.

Staff supervision of nuclear weapons supply in major combat service support headquarters is exercised by nuclear weapons staff personnel in the logistics staff section at the headquarters of:

- Theater Army.
- Theater Army Area Command.
- Corps Support Command.
- Nuclear Weapons Support Command (functional).

Nuclear weapons support personnel in various support battalions, groups, brigades, or higher headquarters perform nuclear weapon supply management at the various headquarters. During combat or increased readiness, nuclear weapons logistical elements (NWLE) are formed to aid in nuclear weapons supply.

SUPPORT

Nuclear weapons ammunition support consists of supply and maintenance support to nuclear-capable units. It includes:

- Direct support (DS) and general support (GS) supply of nuclear weapons.
- DS and GS maintenance of nuclear weapons materiel, including test and handling equipment and nuclear weapon trainers.
- DS and GS maintenance supply of nuclear weapons repair parts.

- **DS supply of nuclear weapons spotting rounds, propellant charges, and emergency demolition materials associated with specific quantities of nuclear weapons.**
- **DS supply of specified major missile components used with nuclear warheads.**

Nonnuclear ammunition service is provided at locations other than the supporting nuclear weapons DS/GS unit. It includes:

- **DS and GS supply of nonnuclear ammunition.**
- **DS maintenance of all other missiles, rockets, and missile system-peculiar ground guidance and launching equipment, special tools, and missile-peculiar test and handling equipment.**
- **Explosive ordnance disposal (EOD) service.**

COMMUNICATIONS ZONE (COMMZ)

Nuclear weapon DS/GS activities are part of the general support structure of TAACOM. They provide DS and GS support to using units located in their areas of responsibility within the communications zone. DS/GS activities may maintain reserve stocks of nuclear weapons. They also serve as a means of dispersing stocks within COMMZ and provide an emergency source for the combat zone when shipments cannot be made from other sources. Nuclear weapon DS/GS activities may store and maintain using units' PNLs. Using units retain responsibility to pick up and transport their PNLs. DS/GS activities establish airheads for shipments from CONUS.

COMBAT ZONE

Ordnance nuclear weapon support companies operate special ammunition supply points in the combat zone close behind division rear boundaries where direct support demands are heaviest and general support activities farther to the rear. These units:

- **Maintain combat zone and theater reserve stocks which are dispersed throughout corps rear and COMMZ.**
- **Replenish SASP stocks.**
- **Operate SASP for specified units.**

DISTRIBUTION

Nuclear weapon logistical elements, formed from resources available to logistics commanders, control nuclear weapon distribution at corps and theater tactical operation centers (TOC). The mission of NWLEs is to *expedite the flow of directives concerning supply of nuclear weapons from the TOC to the Materiel Management Center to storage locations*. Stockage levels of nuclear weapons are established by *command decisions based on the tactical situation*. Ordnance activities must keep supported firing and demolition units informed of the location of SASPs and, if possible, provide one-stop service for the issue of complete nuclear rounds.

CHAPTER 7

NUCLEAR ACCIDENT AND INCIDENT CONTROL (NAIC)

GENERAL

The purpose of nuclear accident and incident control is to:

- Minimize injury and loss of life.
- Minimize interference with military operations—delaying a nuclear-capable unit from performing its mission or restricting mobility of units in the vicinity of the accident.
- Secure classified information and material.

Direct enemy action, vehicle and aircraft accidents, handling accidents, and fires all offer potentially hazardous situations for nuclear weapons. *It is necessary to provide the safest possible environment for these weapons.* Nuclear units must be prepared to implement necessary measures in the event an accident occurs. Safety features designed into nuclear weapons should preclude any significant nuclear yield from a weapon involved in an accident. However, a weapon involved in a fire, explosion, or mechanical rupture may spread and deposit radioactive products of plutonium and uranium. *Any partial nuclear yield will produce a radiation hazard.*

THE HAZARDS

With an understanding of the hazards associated with a nuclear accident, *common sense can preclude or reduce casualties.*

The primary hazard associated with plutonium results from alpha-emitting particles entering the body by inhalation or ingestion or through deep puncture wounds. Protection is provided by masks against inhalation, by caution against ingestion, and by thorough washing and bandaging of deep wounds. Absorption through unbroken skin or shallow wounds is of little concern.

Uranium particles may enter the body in the same manner as plutonium particles, but they constitute a less severe radiological health hazard. *The principal hazard from uranium is heavy metal poisoning.* Chunks of uranium emit low-energy gamma radiation. Emergency crews can be protected by controlling stay time in areas where gamma radiation is being emitted.

EMERGENCY MEASURES

Nuclear-capable unit SOPs should include NAIC emergency measures based on SOPs of higher level commands and upon agreements with and capabilities of host country territorial or supporting commands. Detailed operations should follow appropriate provisions of FM 3-15, Nuclear Accident Contamination Control.

Immediate measures include:

- Rescue
- First aid
- Evacuation of injured
- Firefighting
- Notification and request for assistance to Division Tactical Operations Center (DTOC), Division Support Command (DISCOM), or Corps Support Command (COSCOM) as appropriate.

Additional actions by the unit or individual having custody of the weapon(s) at the time of the accident may include:

- Marking the accident site and restricting movement into the area.
- Warning units downwind of possible radiation hazard.
- Determining status of weapon(s) or components for a follow-up message to the commander responsible for area damage control.

APPENDIX REFERENCES

TITLE

ARMY REGULATIONS (AR)

50-5	<i>Nuclear Surety</i>
50-101 thru 50-111	<i>Safety Rules for the Operation of Nuclear Weapon Systems (U)</i>
220-58	<i>Organization and Training for Nuclear, Biological, and Chemical Defense</i>
380-5	<i>Department of the Army Supplement to DOD 5200.1-R</i>
700-65	<i>Nuclear Weapons and Nuclear Weapons Materiel</i>

FIELD MANUALS (FM)

3-12	<i>Operational Aspects of Radiological Defense (FMFM 11-5)</i>
3-15	<i>Nuclear Accident Contamination Control</i>
5-26	<i>Employment of Atomic Demolition Munitions (ADM)</i>
5-26A	<i>Employment of Atomic Demolition Munitions (ADM) (U)</i>
6-20	<i>Fire Support in Combined Arms Operation (How to Fight)</i>
9-6	<i>Ammunition Service in the Theater of Operations</i>
9-47	<i>Special Ammunition Unit Operations</i>

APPENDIX

21-40	<i>NBC Defense</i>
31-85	<i>Rear Area Protection (RAP) Operations</i>
32-6	<i>SIGSEC Techniques</i>
32-20	<i>Electronic Warfare (EW) (U)</i>
44-1	<i>US Army Air Defense Artillery Employment (How to Fight)</i>
44-1A	<i>US Army Air Defense Artillery Material (U)</i>
55 series	<i>Air Transport Procedures</i>
100-5	<i>Operations (How to Fight)</i>
101-10 series	<i>Staff Officers' Field Manual: Staff Organization and Procedures</i>
101-31-1	<i>Staff Officers' Field Manual: Nuclear Weapons Employment Doctrine and Procedures (FMFM 11-4)</i>
101-31-2	<i>Staff Officers' Field Manual: Nuclear Weapons Employment, Effects Data (FMFM 11-4A) (U)</i>
101-31-3	<i>Staff Officers' Field Manual: Nuclear Weapons Employment, Effects Data (FMFM 11-4B)</i>

TECHNICAL MANUALS (TM)

3-220	<i>Chemical, Biological, and Radiological (CBR) Decontamination</i>
9-1100 series	<i>Operator and Organizational Manuals: (Specific System)</i>
9-1300-200	<i>Ammunition, General</i>
9-1300-203/2	<i>Equipment Serviceability Criteria for 762-MM Rocket (Honest John Rocket System)</i>
9-1300-203/3	<i>Artillery Ammunition, Cartridge/Projectile-Fuze Combination Charts</i>
39-0-1A	<i>Numerical Index to Joint Atomic Weapons Publications (U)</i>
39-50-8	<i>Emergency Destruction of Nuclear Weapons (U)</i>

39-100-1	<i>Supply Management of Nuclear Weapons Materiel</i>
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39-100-4	<i>Custody, Accountability, and Control of Nuclear Weapons</i>
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TECHNICAL BULLETIN (TB)

385-2	<i>Nuclear Weapons Fire Fighting Procedures</i>
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APPLICABLE ARMY TRAINING AND EVALUATION PROGRAMS (ARTEP)

JCS Pub 13 Vol I	<i>Policy and Procedures Governing the Authentication and Safeguarding of Nuclear Control Orders</i>
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Vol II	<i>Policy and Procedures Governing Permissive Action Link/Coded Switch Cipher Systems</i>
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